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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,239	03/12/2004	David Allen Brown	9-2	7551
7590 Ryan, Mason & Lewis, LLP 90 Forest Avenue Locust Valley, NY 11560		08/22/2007	EXAMINER LIU, BEN H	
			ART UNIT 2609	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/799,239

Applicant(s)

BROWN ET AL.

Examiner

Ben H. Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 13-22 is/are rejected.
- 7) ☒ Claim(s) 6-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12 March, 2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 13, 14, 16, 17, 18 and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Davies et al. (U.S. Patent Application Publication 2003/0185249).

For claims 1, 16, 17, and 19, Davies et al. discloses a processor comprising at least a portion of a first split transmit and receive media access controller; the split transmit and receive media access controller having a transmit unit and a receive unit physically separated from one another; wherein an interface for directing signals between the transmit unit and the receive unit of the first split transmit and receive media access controller is configurable to multiplex the signals with signals directed between a transmit unit and a receive unit of at least a second split transmit and receive media access controller (see paragraphs 11, 17 and figure 2).

For claim 5, Davies et al. discloses the processor described above wherein the interface comprises a receive interface block coupled to a generate interface block via an interface bus, the generate interface block receiving signals from a plurality of media access controller receive

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units and multiplexing the signals onto the interface bus for delivery to the receive interface block, the receive interface block de-multiplexing the signals from the interface bus for delivery to appropriate ones of a plurality of media access controller transmit units (see paragraphs 46-48 and figure 2).

For claim 13 and 14, Davies et al. discloses the processor described above wherein the interface comprises a plurality of channels, each having one or more ports associated therewith, and wherein a given signal to be directed between transmit and receive units of a given split transmit and receive media access controller is assigned to a particular channel and port of the interface. The channels may have up to eight ports, with a single-bit nibble address being utilized to identify a particular one of first and second four-port groups of a given eight-port channel (see paragraphs 46-48).

For claim 18, article of manufacture comprising a machine-readable storage medium for use in conjunction with the processor described above. The medium stores one or more software programs implementing the steps of operating split transmit and receive media access controllers (see paragraph 28).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 2, 15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et al. (U.S. Patent Application Publication 2003/0185249) in view of Lucas et al. (U.S. Patent 6,275,501).

For claims 2, 15, and 20, Davies et al. discloses all the subject matter of the claimed invention with the exception wherein one or more of the transmit units are implemented in a first region of an integrated circuit, and one or more of the receive units are implemented in a second region of the integrated circuit, remote from the first region. Lucas et al. from the same or similar fields of endeavor teach a MAC on a single integrated circuit with separate transmit and receive paths (see column 4 lines 53-67 and column 5 lines 1-12). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the MAC integrated circuit with separate transmit and receive paths as taught by Lucas et al. with the processor comprising split transmit and receive media access controllers as taught by Davies et al. The MAC integrated circuit as taught by Lucas et al. can be implemented by fabricating the MAC integrated circuit with both transmit and receive circuit components according to the circuit diagrams (see figure 2). The motivation for using a single integrated circuit for the MAC containing separate receive and transmit paths as taught by Lucas et al. is to reduce power

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consumption and increase reliability by minimizing the components that need to be connected at the circuit board level.

6. Claims 3, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et al. (U.S. Patent Application Publication 2003/0185249) in view of Amit (U.S. Patent Application Publication 2002/0093970).

For claims 3, 21, and 22, Davies et al. discloses all the subject matter of the claimed invention with the exception wherein one or more of the transmit units are implemented on a first integrated circuit and one or more of the receive units are implemented on a second integrated circuit. Amit from the same or similar fields of endeavor teaches a communication device comprising a first integrated circuit including one or more receivers with a first MAC function and a second integrated circuit with one or more transmitters with a second MAC function (see paragraph 11). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the communication device with transmitters and receivers on separate integrated circuits as taught by Amit with the processor comprising split transmit and receive media access controllers as taught by Davies et al. The communication system as taught by Amit can be implemented by manufacturing separate integrated circuits for the transmitters and receivers and connecting them at the circuit board level. The motivation for using separate integrated circuits for transmit and receive functions is to allow flexibility through separate capacity levels of incoming and outgoing traffic.

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7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et al. (U.S. Patent Application Publication 2003/0185249) in view of Lucas et al. (U.S. Patent 6,275,501) and Amit (U.S. Patent Application Publication 2002/0093970).

For claim 4, Davies et al. discloses all the subject matter of the claimed invention with the exception wherein the interface is controllably operable in one of at least two modes including an internal mode of operation, in which the interface is configured to deliver signals between one or more transmit units and one or more receive units where the transmit units and the receive units are implemented on the same integrated circuit. Lucas et al. from the same or similar fields of endeavor teach a MAC on a single integrated circuit with separate transmit and receive paths (see column 4 lines 53-67 and column 5 lines 1-12). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the MAC integrated circuit with separate transmit and receive paths as taught by Lucas et al. with the processor comprising split transmit and receive media access controllers as taught by Davies et al. The MAC integrated circuit as taught by Lucas et al. can be implemented by fabricating the MAC integrated circuit with both transmit and receive circuit components according to the circuit diagrams (see figure 2). The motivation for using a single integrated circuit for the MAC containing separate receive and transmit paths as taught by Lucas et al. is to reduce power consumption and increase reliability by minimizing the components that need to be connected at the circuit board level.

For claim 4, Davies et al. discloses all the subject matter of the claimed invention with the exception wherein the interface is controllably operable in one of at least two modes including an external mode of operation, in which the interface is configured to deliver signals

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between one or more transmit units and one or more receive units where the transmit units and the receive units are implemented on different integrated circuits. Amit from the same or similar fields of endeavor teaches a communication device comprising a first integrated circuit including one or more receivers with a first MAC function and a second integrated circuit with one or more transmitters with a second MAC function (see paragraph 11). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the communication device with transmitters and receivers on separate integrated circuits as taught by Amit with the processor comprising split transmit and receive media access controllers as taught by Davies et al. The communication system as taught by Amit can be implemented by manufacturing separate integrated circuits for the transmitters and receivers and connecting them at the circuit board level. The motivation for using separate integrated circuits for transmit and receive functions is to allow flexibility through separate capacity levels of incoming and outgoing traffic.

Allowable Subject Matter

8. Claims 6-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben H. Liu whose telephone number is (571) 270-3118. The examiner can normally be reached on Monday Through Friday 7:30AM to 5:00PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BL



DANG T. TON
SUPERVISORY PATENT EXAMINER